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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,288	07/29/2003	Walter G. Scott	1823.015000A	5386

26111 7590 10/04/2004

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WASHINGTON, DC 20005

EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,288

Applicant(s)

SCOTT ET AL.

Examiner

Mark Budd

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-26-04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1, 2, 5-8, 10, 11, 14 and 23 are rejected under 35 U.S.C. 102(a) as being anticipated by Diepers.

Diepers (fig. 1) teaches a matrix of ceramic piezo elements #14 with strip electrodes formed on opposing ends so as to allow various combinations of driving and sensing of acoustic signals. The gap between piezo elements is filled with an acoustical mis-match material such as epoxy or silicone rubber (col. 5, ln 13-30). Note that statements such as “ford sensing biometric information” have not been given patentable weight, as they do not alter the actual structure defined by the claims.

Claims 15, 19 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Masuzawa.

Note figures 1, 6A and 6B teach an array of piezo elements \$47 in an epoxy binder #48 (which provides an impedance mismatch for isolation), a processor #150 controls the input/output from the device. Figure 2 teaches backing layer #44 and impedance matching (and protecting) layer #445.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 4, 9, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diepers.

As noted above, Diepers teaches the basic claimed transducer structure. However, Diepers does not explicitly teach the use of some of the specific impedance mismatching materials used to isolate the piezo elements from cross-talk and or dampen unwanted acoustic input/output. However, selection from among known suitable materials has long been held to be within the skill expected of the routineer. Air, foam, epoxy, micropheres etc are all well known s impedance mis matching materials for use in piezoelectric transducers (official notice taken) and thus their use would have been obvious to one of ordinary skill in the art.

Claims 17, 18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masuzawa.

Misuzawa teaches the transducer structure but not some specific materials. For the reasons noted in the preceding rejection, selection from among these known materials would have been obvious to one of ordinary skill in the art.

Further cited of interest are Rokurota, Carson, Matsui, Saito, Forster, McShane and Chatigny.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Budd Mark whose telephone number is (571)272-2019. The examiner can normally be reached on Monday-Thursday from 6am to 4pm.

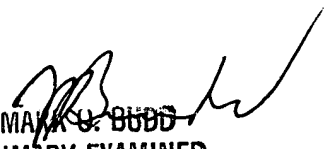
Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ramirez Nestor, can be reached on D. Schuberg. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Budd/ds

09/21/04


MARK U. BUDD
PRIMARY EXAMINER
ART UNIT 212